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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,586	07/24/2001	Elizabeth Belva Hamel	SVL920010010US2	7180
7590	01/13/2005		EXAMINER	
			PHAM, KHANH B	
			ART UNIT	PAPER NUMBER
			2167	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/912,586	HAMEL ET AL.	
Examiner Khanh B. Pham	Art Unit 2167		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12 July 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/12/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed July 12, 2004 has been considered by the Examiner.

### ***Response to Amendment***

2. The amendment filed July 12, 2004 has been entered. Claims 1, 5, 9, 13, 17 and 21 have been amended.

### ***Claim Objections***

3. Claims 2-3, 6-8, 10-11, 14-16, 18-19, 22-24 are objected to because of the following informalities:

- the word "being" at line 1 of claims 2-3, 10-11, 18-19 should be changed to "is";
- the word "having" at line 1 of claims 6, 14, 22 and line 2 of claims 8, 16, 24 should be changed to "has";
- the word "loading" at line 1 of claims 7, 15, 23 should be changed to "loads";

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 1-2, 6-10, 14-18, 22-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Corporation ("Datajoiner: a Multidatabase Server Version 1), hereinafter "IBM", and in view of Hejlsberg et al. (US 6,151,602), hereinafter "Hejlsberg".

**As per claims 1, 9, 17,** IBM teaches a method, a system and a program storage device for loading data from a remote data source, in a computer system network connecting a source site and a target site via a database connection communication line (See page 11, Fig. 4), the method comprising the following steps:

- "(a) coupling the source site to at least one data source and to a software server having multi-database access to DBMSs" at page 11, Fig. 4;

- "(b) at the target site requesting data loading from the source site via a block of Structured Query Language (SQL) statements or their equivalent" at page 7, Fig. 1; and
- (c) transporting data via the database connection communication line according to a multi-database access communication protocol" at page 12, 1<sup>st</sup> paragraph.

IBM does not teach "transporting data record by record" nor "the target site loading records concurrently with the unloading of records in the source site" as claimed. However, Hejlsberg teaches a similar method for loading data from a remote data source (See Fig. 3), wherein data is transported "record by record" and "the target site loading records concurrently with the unloading of records in the source site" at Col. 7 lines 30-37 and Col. 7 line 66 to Col. 8 line 10).

(Examiner notes: Hejlsberg teaches a data packet for transmitting data from a database using sequential or streaming method wherein data is transmitted "one piece of information at a time". At Fig. 4, Hejlsberg shows the layout of a data packet comprises row data, therefore, "piece of information" is correspond to a row data. Hejlsberg also provides the advantage of using this streaming method which "allows the system to process data while it is still being received; this is important, for instance, for data being received across the Internet").

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine IBM and Hejlsberg's teaching to improve data transmitting speed by "allowing the system to process data while it is still being received". Modification of the IBM's system a suggested by Hejlsberg would reduce user's waiting time for data to arrive, especially "for data being received across the Internet", as noted by Hejlsberg at Col. 7 lines 30-37.

**As per claims 2, 10, 18,** IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. Hejlsberg also teaches: "a data record being transported across the database connection communication line as soon as one or more data records are unloaded from the source site, and data loading at the target site beginning as soon as a record was transported to the target site" at Col. 7 lines 30-36 and Col. 7 line 66 to Col. 8 line 17.

**As per claims 6, 14, 22,** IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM also teaches: "the server site having access to multiple data sources, physically distributed and disparate DBMSs, residing on different hardware systems and possibly storing data in a different format" at page 11, Fig. 4.

**As per claims 7, 15, 23,** IBM and Hejlsberg teach the method, system and program storage device according to claims 6, 14, 22 as discussed above. IBM also teaches: "the server site loading data from multiple data sources, further comprising a

step for using a means for consolidating data from multiple data sources" at page 1, 4<sup>th</sup> and 5<sup>th</sup> and page 11, Fig. 4.

**As per claims 8, 16, 24,** IBM and Heilsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM also teaches: "the database connection communication line utilizing the TCP/IP protocol" at page 11, 3<sup>rd</sup> paragraph, and "the software server having multi-database access to DBMSs including a Distributed Relational Database Architecture (DRDA)" at page 12, 1<sup>st</sup> paragraph.

7. **Claims 3, 11, 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM and Heilsberg as applied to claims 1-2, 6-10, 14-18, 22-24 above, and further in view of Gottemukkala ("Interfacing Parallel Applications and Parallel Databases"), hereinafter "**Gottenmukkala**".

**As per claims 3, 11, 19,** IBM and Heilsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM and Heilsberg do not explicitly teach: "the data loading being performed in a pipeline manner, loading data records in multiple partitions with a plurality of parallel streams, pointed to by a plurality of data source partition cursors", However, Gottemukkala teaches a method for perform database query in parallel using cursors (See Fig. 2), wherein "the data loading being performed in a pipeline manner, loading data record in multiple partitions with a plurality of parallel streams, pointed to a plurality of data source partition cursors" at page 2, Col. 1 and Figs. 2 –7. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify IBM and

Hejlsberg teaching so that the data loading could be performed in parallel as taught by Gottemmukkala, in order “to speed up the performance of complex queries, which makes manipulation of large data sets feasible and manageable” (page 1, Col. 1, 1<sup>st</sup> paragraph).

8. **Claims 4-5, 12-13, 20-21 are rejected under 35 U.S.C. 103(a)** as being unpatentable over IBM and Hejlsberg as applied to claims 1-2, 6-10, 14-18, 22-24 above, and further in view of Vassilakis et al. (“Implementing Embedded Valid Time Query Languages”), hereinafter “Vassilakis”.

**As per claims 4, 12, 20,** IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM and Hejlsberg do not explicitly teach: “the block of SQL statements comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE mode”. However, Vassilakis teaches a method of using SQL to retrieve data from database “a row-at-a-time” similar to IBM and Hejlsberg teaching wherein “the block of SQL statements comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE mode” at page 7. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement IBM and Hejlsberg’s teaching in “EXECUTE IMMEDIATE mode” in order to process the dynamic formulated SQL statement.

**As per claims 5, 13, 21,** IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM and Hejlsberg do not teach: “the block of SQL statements comprises: a SQL DECLARE

CURSOR FOR SELECT statement, for defining a cursor referencing separately each SELECT statement result record unloading from the server site, and a LOAD command and an operator INCUSROR with the same cursor name for pointing to the receiving record at the target site". However, Vassilakis teaches a method of using SQL to retrieve data from database "a row-at-a-time" similar to IBM and Hejlsberg's teaching using "a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor referencing separately each SELECT statement result record unloading from the server site, and a LOAD command and an operator INCUSROR with the same cursor name for pointing to the receiving record at the target site" at page 2, section 2.2. As noted by Vassilakis, "using cursors, an application may obtain addressability to tuples stored in the database (one tuple at a time), fetch data values into its address space, as well as delete or modify the tuples"(page 3, section 2.2). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Vassilakis with IBM and Hejlsberg's teaching in order to allow applications to address considered database data at row level (i.e. tuple level) instead of data table level, in order to reduce unnecessary data transfer by transferring only relevant rows instead of the whole table.

***Response to Arguments***

9. Applicant's arguments filed July 12, 2004 have been fully considered but they are not persuasive. The examiner respectfully traverses applicant's arguments.

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10. Regarding claims 1, 9 and 17, Applicant objected to the Office Action because "Hejlsberg reference does not have the quoted language" as presented in the Office Action. The examiner respectfully submits that the Office Action should be read as follows:

- The quoted languages are exact languages taken from claims;
- The portion after the quoted languages, begin with "at" followed by line and column or page number is the portion of the reference containing teaching of the quoted language.

Applicant argued that Hejlsberg reference does not teach "a software server having multi-database access to DBMSs multi-database access communication protocol, as claimed in element (a) and (c)". However, the examiner respectfully submits that the Office Action did not relied on Hejlsberg for the teaching of the limitations listed above. The examiner instead relied on the "IBM" reference which teaches "a software server having multi-database access to DBMS" at page 11, Fig. 4 and "transporting data via the database connection communication line according to a multi-database access communication protocol" at page 12, 1<sup>st</sup> paragraph.

Applicant argued that "Hejlsberg does not transfer data record-by-record but packet-by-packet". On the contrary, Hejlsberg uses data packets for transmitting data from a database using sequential or streaming method, wherein data is transmitted "one piece of information at a time" at Col. 7 lines 30-37. Hejlsberg teaches at Fig. 4 a layout of a data packet includes row data 430. Therefore, "piece of information" correspond to

row data, and Hejlsberg's packet-by-packet data transfer is same as row-by-row, or record-by-record as claimed.

Applicant argued that Hejlsberg does not teach: "target site loading of records occurs concurrently with the unloading of records in the source site". On the contrary, Hejlsberg teaches at Col. 7 line 66 to Col. 8 line 10 that "a data packet representing ordinary data can be "partial", meaning the total data content is divided into multiple data packets", and "the subsequent data packets merely include an data packet identifier and data rows". Since the data rows (i.e., records) are divided into multiple data packets, when client receives and unloads the first data packet contains the first set of record, the next sets of record are still streaming out of the source site. Therefore, the target site loading of records occurs concurrently with the unloading of records in the source site as claimed.

11. In response to applicant's argument that there is no suggestion to combine the references and applicant's statement that "it is required by law that the motivation to combine the references must be found in the referenced prior art before the references can be combined", the examiner respectfully submits that this statement is incorrect. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both Hejlsberg and

"IBM" teaches a three tiers architecture for responding to SQL requests from a client to a database system (See Hejlsberg's Fig. 3 and IBM's Fig. 4). Hejlsberg suggests using streaming data packet to transmit row data to client, one piece of information at a time, because "this approach allows the system to process data while it is still being received". It is also well known to one of ordinary skill in the art that streaming format allows client system to load data concurrently with the unloading of data from the server. For example, streaming video format allows user to view full motion video immediately after the first set of frames is loaded at the client system, while the next sets of frames are unloaded from the server, without waiting for receiving of all of the frames. The IBM's system is implemented mostly using TCP/IP protocol (See IBM's page 11), meaning data is transmitted across the Internet, therefore, modification of the IBM's system as suggested by Hejlsberg would reduce user's waiting time for data to arrive, especially "for data being received across the Internet", as suggested by Hejlsberg at Col. 7 lines 30-37.

12. In response to applicant's argument that Hejlsberg is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, as discussed above, both Hejlsberg and "IBM" teaches a three tiers architecture for responding to SQL requests from a client to a database system (See Hejlsberg's Fig. 3 and IBM's Fig. 4). Applicant's invention is an improvement of the IBM reference's

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system, whereas the Hejlsberg reference also teaches a system including many elements of the invention of claims 1 such as "source site" (Fig. 3, 355), "target site" (Fig. 3, 310), database server (Fig. 3, 350). Hejlsberg is therefore analogous art and the 103 rejections are proper.

13. In responses to applicant's statement that "Applicant challenges the Office Action "would have been obvious" allegation used to reject all claims of the present invention under Sec. 103 and, as allowed under MPEP Sec. 2144.03, respectfully requests that the Examiner cites prior art references which support all these "would have been obvious" allegations and show how modifications can be accomplished and what motivation was used to modify a reference to arrive at the claimed subject matter and to show how this combination of modified references functions and which structure it has", the examiner respectfully refers applicants to section 6-8 of this Office Action, which show how the examiner interprets claimed limitations, and portions of the references correspond to claimed limitations, what teachings are lacking in the references, as well as motivations for combining references and why it is obvious to combine references.

14. In response to applicant's argument that "non of the referenced prior art teaches elements of claims 1, 9 and 17 and their combination is invalid, there is no valid reason for rejection of these independent claims and claims dependent thereof". The examiner respectfully submits that applicant's arguments only amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Applicants are referred to section 6-8 of this Office Action which show how the examiner interprets

claimed limitations, and portions of the references correspond to claimed limitations, what teachings are lacking in the references, as well as motivations for combining references and why it is obvious to combine references. A *prima facie* case of obviousness has been established and the 103 rejection of claims 1, 9, 17 is proper and should be maintained.

15. Regarding claims 2, 10, 18, applicant objected to the Office Action because "Hejlsberg reference does not have the quoted language" as presented in the Office Action. The examiner respectfully submits that the Office Action should be read as follows:

- The quoted languages are exact language taken from claims;
- The portion after the quoted languages, begin with "at" is the portion of the reference containing teaching of the quoted language.

Applicant argued that the rejection of claims 2, 10, and 18 is improper because the prior art reference does not perform all elements of the independent claims 1, 9 and 17. On the contrary, as discussed above, the 103 rejection of claims 1, 9, and 17 is proper and therefore the 103 rejection of claims 2, 10 and 18 should also be sustained.

16. Regarding claims 6, 14, 22, Applicant argued that the rejection of claims 6, 14 and 22 is improper because the prior art reference does not perform all elements of the independent claims 1, 9 and 17. On the contrary, as discussed above, the 103 rejection of claims 1, 9, and 17 is proper and therefore the 103 rejection of claims 6, 14 and 22 should also be sustained.

17. Applicant argued that the rejection of claims 7, 15 and 23 is improper because the prior art reference does not perform all elements of the independent claims 1, 9 and 17. On the contrary, as discussed above, the 103 rejection of claims 1, 9, and 17 is proper and therefore the 103 rejection of claims 7, 15 and 23 should also be sustained.

18. Applicant argued that the rejection of claims 8, 16, 24 is improper because the prior art reference does not perform all elements of the independent claims 1, 9 and 17. On the contrary, as discussed above, the 103 rejection of claims 1, 9, and 17 is proper and therefore the 103 rejection of claims 8, 16 and 24 should also be sustained.

19. Regarding claims 3, 11, 19, applicant objected to the Office Action because "Gottenmukkala reference does not have the quoted language" as presented in the Office Action. The examiner respectfully submits that the Office Action should be read as follows:

- The quoted languages are exact language taken from claims;
- The portion after the quoted languages, begin with "at" followed by line and column or page number is the portion of the reference containing teaching of the quoted language.

Applicant also argued that Gottenmukkala does not teach "concurrent record-by-record data transfer into partitioned tables that receive the data as claimed". On the contrary, the examiner relied on the Gottenmukkala reference only for the teaching of "data loading being perform in a pipeline manner, loading data records in multiple partitions with a plurality of parallel streams, pointed to by a plurality of data source partition cursor" as taught by Gottenmukkala at page 2, Col. 1 and Figs. 2-7. The other

limitations such as “concurrent record-by-record” are taught by IBM and Heilsberg, as discussed above.

Applicant also argued that the rejection of claims 3, 11 and 19 is improper because the prior art reference does not perform all elements of the independent claims 1, 9 and 17. On the contrary, as discussed above, the 103 rejection of claims 1, 9, and 17 is proper and in view of the argument discussed above, the 103 rejection of claims 3, 11 and 19 should also be sustained.

20. Regarding claims 4, 12, 20, applicant objected to the Office Action because “Vassilakis reference does not have the quoted language” as presented in the Office Action. The examiner respectfully submits that the Office Action should be read as follows:

- The quoted languages are exact languages taken from claims;
- The portion after the quoted languages, begin with “at” followed by line and column or page number is the portion of the reference containing teaching of the quoted language.

Applicant also argued that Vassilakis does not teach: “concurrent record-by-record data transfer in a multi-database DBMS”. On the contrary, the examiner relied on the Vassilakis reference only for the teaching of “the block of SQL statements comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE mode” as taught by Vassilakis at page 7. The other limitations such as “concurrent record-by-record” are taught by IBM and Heilsberg, as discussed above. Further, similar to IBM

and Hejlsberg's teaching, Vassilakis teaches a method for using SQL to retrieve data from database "a row-at-a-time" as follows:

"Cursors provide a **row-at-a-time** interface to the database. Using cursors, an application may obtain addressability to tuples stored in the database (**one tuple at a time**)..." (page 3, section 2.2.)

Applicant also argued that the rejection of claims 4, 12 and 20 is improper because the prior art reference does not perform all elements of the independent claims 1, 9 and 17. On the contrary, as discussed above, the 103 rejection of claims 1, 9, and 17 is proper and in view of the argument discussed above, the 103 rejection of claims 4, 12 and 20 should also be sustained.

21. Regarding claims 5, 13, 21, applicant objected to the Office Action because "Vassilakis reference does not have the quoted language" as presented in the Office Action. The examiner respectfully submits that the Office Action should be read as follows:

- The quoted languages are exact languages taken from claims;
- The portion after the quoted languages, begin with "at" followed by line and column or page number is the portion of the reference containing teaching of the quoted language.

Applicant also argued that Vassilakis does not teach: "concurrent record-by-record data transfer in a multi-database DBMS". On the contrary, the examiner relied on the Vassilakis reference only for the teaching of "the block of SQL statements comprises: a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor

referencing separately each SELECT statement result record unloading from the server site, and a LOAD command and an operator INCURSOR with the same cursor name for pointing to the receiving record at the target site". However, Vassilakis teaches a method of using SQL to retrieve data from database "a row-at-a-time" similar to IBM and Hejlsberg's teaching using "a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor referencing separately each SELECT statement result record unloading from the server site, and a LOAD command and an operator INCURSOR with the same cursor name for pointing to the receiving record at the target site" at page 2, section 2.2. As noted by Vassilakis, "using cursors, an application may obtain addressability to tuples stored in the database (one tuple at a time), fetch data values into its address space, as well as delete or modify the tuples"(page 3, section 2.2). The other limitations such as "concurrent record-by-record" are taught by IBM and Hejlsberg, as discussed above. Further, similar to IBM and Hejlsberg's teaching, Vassilakis teaches a method for using SQL to retrieve data from database "a row-at-a-time" at follows:

"Cursors provide a **row-at-a-time** interface to the database. Using cursors, an application may obtain addressability to tuples stored in the database (**one tuple at a time**)..." (page 3, section 2.2.)

Applicant also argued that the rejection of claims 5, 13 and 21 is improper because the prior art reference does not perform all elements of the independent claims 1, 9 and 17. On the contrary, as discussed above, the 103 rejection of claims 1, 9, and

17 is proper and in view of the argument discussed above, the 103 rejection of claims 5, 13 and 21 should also be sustained.

In light of the foregoing arguments, the 35 U.S.C 103 rejections are hereby sustained.

***Conclusion***

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh B. Pham  
Examiner  
Art Unit 2167

January 5, 2005  
KBP

  
Primary Examiner